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SUBSTITUTE SPECIFICATION

TITLE OF THE INVENTION

DISPLAY DEVICE

BACKGROUND OF THE INVENTION

The present invention relates to a display device of the type which utilizes an emission of electrons into a vacuum space, which is defined between a front substrate and a back substrate; and, more particularly, the invention relates to a display device in which there are arranged, with high accuracy, cathode lines having electron sources and control electrodes, which control the quantity of electrons emitted from the electron sources, which display device can exhibit stable display characteristics by maintaining a vacuum between the front substrate and the back substrate.

As a display device which exhibits a high brightness and high definition, color cathode ray tubes have been widely used conventionally. However, along with the recent request for higher quality in the generation of images in information processing equipment or television broadcasting, there has been an increased demand for planar displays (panel displays), which are light in weight and require a small space, while exhibiting a high brightness and a high definition.

As typical examples, liquid crystal display devices, plasma display devices and the like have been commercialized. Further, as display devices which can realize a higher brightness, it is expected that various kinds of panel-type display devices, including a display device which utilizes the emission of electrons from electron Sources into a vacuum (hereinafter, referred to as "an electron emission